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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,513	01/02/2002	Andreas Krell	P21519	6687

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EXAMINER

MARCHESCHI, MICHAEL A

ART UNIT	PAPER NUMBER
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1755

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DATE MAILED: 10/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/926,513

Applicant(s)

KRELL ET AL.

Examiner

Michael A Marcheschi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED-STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/9/03
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24, 26-29, 31-33, 36-45, 47, 48 and 51-64 is/are allowed.
- 6) ☒ Claim(s) 25, 30, 34, 35, 46, 49, 50 and 65-68 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 25 and 30 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 25 and 30 are indefinite as to the phrase "further annealing of (e)" because claims 24 and 29 do not define a further annealing step. The term "**further**" should be canceled.

PREVIOUS REJECTIONS:

Claims 34, 35, 49 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 294,208 for the same reasons set forth in the previous office action which are incorporated herein by reference.

Claims 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 554,908 for the same reasons set forth in the previous office action which are incorporated herein by reference.

NEW REJECTIONS:

Newly added claims 65-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over either (1) EP 294,208 or (2) EP 554,908.

As defined in the previous office action, the references teach alpha alumina materials (i.e. particles-powders) having a size less than 0.5 microns (nanocorundum) and although the D₈₄

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value is not literally defined, as can be seen from this reference, the average size (D_{50}) is less than 0.5 microns, thus the D_{84} value must also be less than this value. In view of this, the claimed size is broadly encompassed by the reference. With respect to the redispersible limitation, it is the examiners position that since the material (powder) has the same size, it can be re-dispersed, thus reading on this limitation in the absence of any evidence showing the contrary. **Finally**, applicants use process limitations to define the product and "product-by-process" claims do not patentably distinguish the product even though made by a different process. *In re Thorpe* 227 USPQ 964.

Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katoh.

Katoh teaches in the abstract, column 3, lines 35-38 and table 2, an alumina sintered (i.e. calcination of the reference broadly encompasses sintered) material having a pore size and pore volume within the claimed range.

The reference teaches an alumina sintered material having the claimed pore size and pore volume and although the reference does not state that the material is corundum, it is the examiners position that "alumina", in general, encompasses and therefore make obvious corundum because "A generic disclosure renders a claimed species *prima facie* obvious. *Ex parte George* 21 USPQ 2d 1057, 1060 (BPAI 1991); *In re Woodruff* 16 USPQ 2d 1934; *Merk & Co. v. Biocraft Lab. Inc.* 10 USPQ 2d 1843 (Fed. Cir. 1983); *In re Susi* 169 USPQ 423 (CCPA 1971)". In addition, the teaching on page 3 implies that the alumina can be any type of alumina. Finally, although the reference does not literally recite "sintered", it is the examiners

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position that calcination of the reference broadly encompasses sintered, especially since no sintering temperature is defined in the claims.

Applicant's arguments filed 8/19/03 have been fully considered but they are not persuasive.

Applicants argue that EP 294,208 does not teach nanocorundum **powders (as is required by original claim 34 and new claims 65-68), but in contrast teach corundum articles which are not powders.** The examiner disagrees because it is stated on page 2, lines 60-61 that “the present invention provides a process for **preparing dense very fine grained alpha alumina and** the production of... **articles therefrom**”. It is the examiners position that this teaching implies that alpha alumina **particles** (i.e. encompasses powder) are made which are fine grained (i.e. less than 0.5 micrometer) and that these fine grained particles are used to make the articles. In addition, as can be seen from page 2, line 62, the reference literally defines that alpha alumina powders can be made. In view of this, the reference clearly implies alpha alumina particles (powders). Applicants also appear to argue that this reference contains additional component (iron complex) not required in the instant claims. The examiner disagrees because the reference clearly states on page 3, line 51, that this complex **can** be added and the term “can” does not definitely mean that this component is present. In addition, as can be seen from claim 1 of this reference, **no** complex is used in conjunction with the alumina material. In view of this, all that is required in the reference is the alumina material and the complex is an optional additive, thus still reading on applicants “consisting essentially of” limitation. However, the examiner has

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withdrawn the previous rejections of claim 46-48 based on this reference because on page 7, lines 21-25, the porous material (32% porosity) contains this complex.

Applicants appear to argue that EP 554,908 does not teach the claimed nanocorundum **powders in view of the different process disclosed in making the reference powders**. The examiner is unclear as to this argument because claims 34 and 35 do not define any process limitations and even if they did, applicants have not provided any comparative evidence that shows a patentable distinction between the claimed powders and the reference powders (comparison between the reference powders and the claimed powders). Finally, applicants appear to argue the particle data and state that this data is not as accurate as the measuring techniques defined by applicants. The examiner is unclear as to how this shows patentable evidence. If applicants wish to pursue this remark, they are required to show comparative evidence between the testing techniques.

In view of the teachings as set forth above, it is still the examiners position that the references reasonably teach or suggest the limitations of the rejected claims .

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

"A reference is good not only for what it teaches but also for what one of ordinary skill might reasonably infer from the teachings. *In re Opprecht* 12 USPQ 2d 1235, 1236 (CAFC 1989); *In re Bode* USPQ 12; *In re Lamberti* 192 USPQ 278; *In re Bozek* 163 USPQ 545, 549 (CCPA 1969); *In re Van Mater* 144 USPQ 421; *In re Jacoby* 135 USPQ 317; *In re LeGrice* 133 USPQ 365; *In re Preda* 159 USPQ 342 (CCPA 1968)". In addition, "A reference can be used for all it realistically teaches and is not limited to the disclosure in its preferred embodiments" See *In re Van Marter*, 144 USPQ 421.

Evidence of unexpected results must be clear and convincing. *In re Lohr* 137 USPQ 548. Evidence of unexpected results must be commensurate in scope with the subject matter claimed. *In re Linder* 173 USPQ 356.

Claims 24, 26-29, 31-33, 36-45, 47, 48 and 51-64 are allowable over the prior art of record.

The references of record fail to teach or suggest the claimed methods of making nanocorundum or nanoporous alumina and products resulting therefrom, wherein the methods and products comprises the claimed specific limitations.

Claims 25 and 30 would be allowable if amended to overcome the indefinite rejection.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Marcheschi whose telephone number is (703) 308-3815. The examiner can normally be reached on Monday through Thursday between the hours of 8:30-6:00 and every other Friday between the hours of 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor, Mark L. Bell, can be reached at (703) 308-3823.

Amendments can also be sent by fax to the numbers set forth below:

For after final amendments, the fax number is (703) 872-9311;

For non-final amendments, the fax number is 703 872-9310.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Michael Marcheschi

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10/03



**MICHAEL MARCHESCHI
PRIMARY EXAMINER**